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EXAMINER
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GWARTNEY, ELIZABETH A

ART UNIT	PAPER NUMBER
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1781

NOTIFICATION DATE	DELIVERY MODE
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08/20/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/530,920	<b>Applicant(s)</b> MIRANDA ET AL.	
	<b>Examiner</b> ELIZABETH GWARTNEY	<b>Art Unit</b> 1781	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 7, 9-13, 16, 18-28, 30-32 and 37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 9-13, 16, 18-28, 30-32 and 37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

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### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 30, 2010 has been entered.
2. Claims 1-3, 7, 9-13, 16, 18-28, 30-32 and 37 are pending.
3. The previous claim objections, 112 2<sup>nd</sup> Paragraph rejections have been withdrawn in light of applicant's amendments made June 30, 2010.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-3, 9, 11, 12, 20, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mate et al. (“Whey Protein and Acetylated Monoglyceride Edible Coatings: Effect on the Rancidity Process of Walnuts”).

Regarding claims 1-3, Mate et al. disclose coated walnuts comprising: (a) shelled walnut pieces; and (b) a layer of coating comprising antioxidant, i.e. tocopherol, and a barrier coating of acetylated monoglycerides (p.2510/Materials, p. 2510/AMG Formulations and Coating Procedure).

Although Mate et al. does not disclose applying a layer of antioxidant to the surface of the nut and then applying an edible film, it is noted that “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process”, *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) . Further, “although produced by a different process, the burden shifts to applicant to come forward with evidence establishing

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an unobvious difference between the claimed product and the prior art product”, *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983). See MPEP 2113.

Therefore, absent evidence of criticality regarding the presently claimed process and given that Mate et al. meets the requirements of the claimed nut composition, Mate et al. clearly meet the requirements of present claim 1.

Regarding claim 9, Mate et al. disclose all of the claim limitations as set forth above. Mate et al. also disclose that 2.8% to 5% acetylated monoglyceride coating was added to the walnuts (p.2511/Evaluation of the Effect of AMG-Based Coatings).

Regarding claim 10, Mate et al. disclose all of the claim limitations as set forth above, however, Mate et al. do not disclose a nut composition in which the thickness of the coating layer of said nut, which comprises an edible film, ranges from 5  $\mu$ m to 1 mm. As hardness and continuity of the coating are variables that can be modified, among others by adjusting said thickness of coating, with said hardness and continuity of the coating both increasing as the coating thickness is increased, the precise coating thickness would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed coating thickness cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the thickness of the edible coating of Mate et al. to obtain the desired balance between the continuity of the coating and the hardness of the final nut product (*In re Boesch*, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

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Regarding claim 11, Mate et al. disclose all of the claim limitations as set forth above and that the composition further comprises ascorbyl palmitate, i.e. nutraceutical (p.2509/Introduction, p.2510/AMG Formulations and Coating Procedure).

Regarding claim 12 and 23, Mate et al. disclose a method for making coated walnuts according to claim 1, comprising the steps of: (a) applying a coating mixture of antioxidant, i.e. tocopherol, acetylated monoglyceride and ascorbyl palmitate; and (b) cooling said coated walnuts to create a solid acetylated monoglyceride coating.

Given Mate et al. disclose that a solid acetylated monoglyceride coating is created, it necessarily follows that the coating was dried and any solvent removed.

While Mate et al. disclose applying a coating comprising both antioxidant and a barrier coating of acetylated monoglyceride at the same time, the reference does not disclose that the antioxidant is applied in a separate step. Here, Mate et al. disclose substantially the same product produced by substantially the same method as instantly claimed by applicant; where the claimed and prior art products are produced by substantially identical processes, a prima facie case of obviousness has been established. To switch the order of performing process steps, i.e. the order of the applying the ingredients onto the nut, would be obvious absent any clear and convincing evidence and/or arguments to the contrary (MPEP 2144.04 [R-1]). "Selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results."

Regarding claim 20, Mate et al. disclose all of the claim limitations as set forth above. Mate et al. also disclose that the walnuts were placed on pins and dipped in the coating mixture (p.1520/AMG Formulations and Coating Procedure).

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Regarding claim 21, Mate et al. disclose all of the claim limitations as set forth above. Mate et al. also disclose that 2.8% to 5% acetylated monoglyceride coating was added to the walnuts (p.2511/Evaluation of the Effect of AMG-Based Coatings).

10. Claims 7, 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mate et al. ("Whey Protein and Acetylated Monoglyceride Edible Coatings: Effect on the Rancidity Process of Walnuts") as applied to claims 1 and 12, and further in view of Grillo et al. (US 5,470,581).

Regarding claims 7, 13 and 16, while Mate et al. disclose an edible compound selected from the group consisting of a lipid, the reference does not disclose wherein the edible compound includes a cellulose ether or a mixture of (i) a cellulose ether; and (ii) a lipid.

Grillo et al. teach a protective film for coating food forms comprising a mixture of maltodextrin and a cellulose derivative (Abstract, C2/L1-5) wherein the cellulose derivative includes methyl cellulose (MC), hydroxypropyl cellulose (HPC), hydroxypropylmethyl cellulose (HPMC), or carboxymethyl cellulose (CMC) (Abstract, C1/L60-C2/L5). Further, Grillo et al. teach maltodextrin, in combination with cellulosic polymers, exhibits excellent adhesive qualities, enhanced gloss characteristics, and reduced incidence of cloudiness (C5/L35-39).

Mate et al. and Grillo et al. are combinable because they are concerned with the same field of endeavor, namely, compositions for edible films. It would have been obvious to one of ordinary skill in the art at the time of the invention to have added maltodextrin and cellulosic polymers, as taught by Grillo et al., to the acetylated monoglyceride coating of Mate et al. for the

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purpose of improving the clarity of the coating. Further, doing so would improve the adhesive and gloss characteristics of the film coating.

9. Claims 1-3, 9-13, 17-23, 25, 27-28, 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steele et al. (WO 83/00278) in view of Grillo et al. (US 5,470,581) and Mate et al. (“Whey Protein and Acetylated Monoglyceride Edible Coatings: Effect on the Rancidity Process of Walnuts”).

Regarding claim 1, Steele et al. disclose a nut composition provided with an edible coating (Abstract), which comprises:

- a nut(*see* peanut – Abstract), and
- a layer of a hydrophobic colloid film former for said nut consisting of an edible compound selected from the group consisting of acacia gum, cellulose derivatives and dextrans (p.8/L25-p.9/L3, *see* wherein a solution of hydrocolloid, i.e. gum acacia, is added to the peanuts to provide a uniform coating, p. 12/L24-30, p.13/L4-6).

Given Steele et al. disclose coating the peanuts with an aqueous solution made of only a hydrophilic colloid film former, the limitation in claim 1, wherein an edible film consists of a compound selected from a group of hydrocolloid and lipid compounds, has been met.

While Steele et al. disclose an edible film, the reference does not disclose an antioxidant coating.



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Mate et al. teach that butylated hydroxytoluene (BHT) and tocopherols are known to delay the rancidity process in nuts (p.2509/Introduction, p. 2512/Figure 2). Mate et al. teach applying a solution of BHT and oil to walnut pieces (p.2510/BHT Treatment).

Steele et al. and Mate et al. are combinable because they are concerned with the same field of endeavor, namely, improving the shelf life of nut products. It would have been obvious to one of ordinary skill in the art at the time of the invention to have included a layer of antioxidant, i.e. tocopherol or BHT on the walnut pieces of Steele et al. for the purpose of delaying the rancidity of the nuts.

While Steele et al. disclose an edible compound selected from the group consisting of acacia gum, cellulose derivatives and dextrans (P.8/L25-p.9/L3), the reference does not explicitly disclose hydroxypropylmethyl cellulose (HPMC), hydroxypropyl cellulose (HPC), methyl cellulose (MC), carboxymethyl cellulose (CMC), ethylmethyl cellulose (EMC), maltodextrin (MD), a lipid, or a combination of various lipids, and their mixtures.

Grillo et al. teach a protective film for coating food forms comprising a mixture of maltodextrin and a cellulose derivative (Abstract, C2/L1-5) wherein the cellulose derivative includes methyl cellulose (MC), hydroxypropyl cellulose (HPC), hydroxypropylmethyl cellulose (HPMC), or carboxymethyl cellulose (CMC) (Abstract, C1/L60-C2/L5). Further, Grillo et al. teach maltodextrin, in combination with cellulosic polymers, exhibits excellent adhesive qualities, enhanced gloss characteristics, and reduced incidence of cloudiness (C5/L35-39).

Steele et al. and Grillo et al. are combinable because they are concerned with the same field of endeavor, namely, compositions for edible films. It would have been obvious to one of ordinary skill in the art at the time of the invention to have added maltodextrin and cellulosic

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polymers, as taught by Grillo et al., to the acacia gum film coating of Steele et al. for the purpose of improving the clarity of the coating. Further, doing so would improve the adhesive and gloss characteristics of the protective film coating.

Regarding claims 2-3, modified Steele et al. disclose all of the claim limitations as set forth above. Further, Steele et al. disclose that said nut is selected from the group consisting of peanuts (Abstract) wherein said nut is whole (p.4/L29-30).

Regarding claim 9, modified Steele et al. disclose all of the claim limitations as set forth above. Further, Steele et al. disclose that the quantity of edible compound present on the coated nut, expressed in dry weight in relation to the total weight of the coated nut lies between 0.05 and 2% by weight (p.9/L9-11).

Regarding claim 10, modified Steele et al. disclose all of the claim limitations as set forth above, however, Steele et al. do not disclose a nut composition in which the thickness of the coating layer of said nut, which comprises an edible film, ranges from 5  $\mu$ m to 1 mm. As hardness and continuity of the coating are variables that can be modified, among others by adjusting said thickness of coating, with said hardness and continuity of the coating both increasing as the coating thickness is increased, the precise coating thickness would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed coating thickness cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the thickness of the edible coating of Steele et al. to obtain the desired balance between the continuity of the coating and the hardness of the final nut product (*In re Boesch*, 617 F.2d. 272, 205 USPQ 215 (CCPA

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1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

Regarding claim 11, modified Steele et al. disclose all of the claim limitations as set forth above. Steele et al. also disclose a layer of particulate seasoning material, such as sugar, on top of the hydrophilic film former layer (Abstract, p.9/L14-30, p.12/L29).

Regarding claims 12-13, Steele et al. disclose a method for producing a nut coated with an edible coating (Abstract) according to claim 1, which comprises the steps of:

- applying a filmogenic solution (i.e. aqueous solution wherein an edible compound is made in a solvent of water) that comprises an edible compound selected from the group consisting of acacia gum (i.e. gum acacia), cellulose derivatives and dextrans on the surface of a nut to be coated (Abstract, p.8/L25-p.9/L3) and
- drying the filmogenic solution deposited on the surface of said nut to be coated (see roasting – p. 10/L12-24).

While Steele et al. applying an edible film, the reference does not disclose first applying an antioxidant coating.

Mate et al. teach that butylated hydroxytoluene (BHT) and tocopherols are known to delay the rancidity process in nuts (p.2509/Introduction, p. 2512/Figure 2). Mate et al. teach applying a solution of BHT and oil to walnut pieces (p.2510/BHT Treatment).

Steele et al. and Mate et al. are combinable because they are concerned with the same field of endeavor, namely, improving the shelf life of nut products. It would have been obvious

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to one of ordinary skill in the art at the time of the invention to have applied a layer of antioxidant, i.e. tocopherol or BHT on the walnut pieces of Steele et al. for the purpose of delaying the rancidity of the nuts.

While Steele et al. disclose an edible film comprising an edible compound selected from the group consisting of acacia gum, cellulose derivatives and dextrans (p.8/L25-p.9/L3), the reference does not explicitly disclose hydroxypropylmethyl cellulose (HPMC), hydroxypropyl cellulose (HPC), methyl cellulose (MC), carboxymethyl cellulose (CMC), ethylmethyl cellulose (EMC), maltodextrin (MD), a lipid or combination of various lipids, and their mixtures.

Grillo et al. teach a protective film for coating food forms, comprising a mixture of maltodextrin and a cellulose derivative (Abstract, C2/L1-5) wherein the cellulose derivative includes methyl cellulose (MC), hydroxypropyl cellulose (HPC), hydroxypropylmethyl cellulose (HPMC), or carboxymethyl cellulose (CMC) (Abstract, C1/L60-C2/L5). Further, Grillo et al. teach maltodextrin, in combination with cellulosic polymers, exhibits excellent adhesive qualities, enhanced gloss characteristics, and reduced incidence of cloudiness (C5/L35-39).

Steele et al. and Grillo et al. are combinable because they are concerned with the same field of endeavor, namely, compositions for edible films. It would have been obvious to one of ordinary skill in the art at the time of the invention to have added maltodextrin and cellulosic polymers, as taught by Grillo et al., to the acacia gum film coating of Steele et al. for the purpose of improving the clarity of the coating. Further, doing so would improve the adhesive and gloss characteristics of the protective film coating.

Regarding claim 18, modified Steele et al. disclose all of the claim limitations as set forth above. Further, Steele et al. disclose said filmogenic solution (i.e. aqueous solution) comprises

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one or more edible compounds in a concentration between 1% - 50% by weight (see from about 5 to 15% by weight - p.10/L8-9).

Claims 19 and 37, modified Steele et al. disclose all of the claim limitations as set forth above. Further, Steele et al. disclose a filmogenic solution (i.e. aqueous solution) comprising an edible compound selected from the group of cellulose derivatives in a concentration between 2 and 14% (see from about 2 to about 10% of the weight of the coating (p.9/L12-13).

Here, given Steele et al. disclose cellulose derivatives and Grillo et al. teach that common cellulose derivatives used in food film coatings include methylcellulose, hydroxypropylcellulose, hydroxypropylmethylcellulose, hydroxyethyl cellulose or carboxymethylcellulose, it would have been obvious to use any cellulose derivative as the edible compound in the film coating of Steele et al, including those taught by Grillo et al., and arrive at the present invention.

Regarding claim 20, modified Steele et al. disclose all of the claim limitations as set forth above. Steele et al. disclose said filmogenic solution is applied on the nut to be coated in a rotary drum by dripping (*see* rotatable coating reel and rate of addition (i.e. dripping - p.7/L17-18, p.8/L13).

Regarding claim 21, modified Steele et al. disclose all of the claim limitations as set forth above. Further, Steele et al. disclose that the quantity of edible compound present on the coated nut, expressed in dry weight in relation to the total weight of the coated nut lies between 0.05 and 2% by weight (p.9/L9-11).

Regarding claim 22, modified Steele et al. disclose all of the claim limitations as set forth above and Steele also discloses that the drying of said filmogenic solution deposited on said nut

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to be coated is done with air at a temperature equal to or lower than 200°C (see from about 150° to about 180°C – p.10/L17-18).

Regarding claim 23, modified Steele et al. disclose all of the claim limitations as set forth above. Further, Steele et al. disclose that the drying of said filmogenic solution deposited on said nut to be coated comprises the addition of a compound in powder form, selected from the group consisting of an edible protein (i.e. peanut skins – p.5/L14-20, p.9/L14-21).

Regarding claim 25, Steele et al. disclose all of the claim limitations as set forth above. Further, Steele et al. disclose that the drying of said filmogenic solution deposited on said nut is done in an oven (p.10/L14).

Regarding claim 27, modified Steele et al. disclose all of the claim limitations as set forth above. While Steele discloses a method for producing a nut coated with an edible coating including application and drying stages, the reference does not explicitly disclose repeating the stages a variable number of times. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have repeated the application and drying stages. Mere duplication of the application and drying steps has not patentable significance unless a new and unexpected result is produced.

Regarding claims 28 and 30, modified Steele et al. disclose all of the claim limitations as set forth above. Steele et al. also disclose that layers are formed which are the same or different (Abstract). Further Steele et al. disclose the addition of one or more additives to said coated nut (*see sugar – Abstract*).

Regarding claims 31-32, modified Steele et al. disclose all of the claim limitations as set forth above and further discloses that the nut comprises an additional coating selected from the

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group consisting of sugar and salt, which covers said coated nut (p.3/L27-32, p.5/L14-20, p.9/L14-30). Steele et al. also disclose a derivative of a nut which comprises a nut obtainable by means of the method according to claim 12, and further comprises an additional coating selected from the group consisting of sugar and salt, which covers said coated nut (p.3/L27-32, p.5/L14-20, p.9/L14-30).

10. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steele et al. (WO 83/00278) in view of Grillo et al. (US 5,470,581) and Mate et al. ("Whey Protein and Acetylated Monoglyceride Edible Coatings: Effect on the Rancidity Process of Walnuts") as applied to claims 1 and 12, and further in view of Kester et al. ("An Edible Film of Lipids and Cellulose Ether").

Regarding claims 7 and 16, modified Steele et al. disclose all of the claim limitations as set forth above. While Steele et al. disclose said edible compound consists of cellulose derivatives, the reference does not explicitly disclose said edible compound comprises a mixture of (i) a cellulose ether and (ii) a lipid or a combination of various lipids.

Kester et al. teach an edible film comprising a cellulose ether and lipid (Abstract). Further, Kester et al. teach that lipid-based films effectively retard transport of moisture (Abstract).

Steele et al., Grillo et al. and Kester et al. are combinable because they are concerned with the same field of endeavor, namely, edible films comprising cellulose derivatives. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have

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used a mixture of lipid and cellulose ether, as taught by Kester et al., in the edible film coating of Steele et al. for the purpose of mitigating moisture migration.

Regarding claim 36, Steele et al. disclose a nut composition provided with an edible coating (Abstract), which comprises:

- a nut(*see* peanut – Abstract), and
- a layer of a hydrophobic colloid film former for said nut consisting of an edible compound selected from the group consisting of acacia gum, cellulose derivatives and dextrans (p.8/L25-p.9/L3, *see* wherein a solution of hydrocolloid, i.e. gum acacia, is added to the peanuts to provide a uniform coating, p. 12/L24-30, p.13/L4-6).

While Steele et al. disclose an edible compound selected from the group consisting of acacia gum, cellulose derivatives and dextrans (P.8/L25-p.9/L3), the reference does not explicitly disclose hydroxypropylmethyl cellulose (HPMC), hydroxypropyl cellulose (HPC), methyl cellulose (MC), carboxymethyl cellulose (CMC), ethylmethyl cellulose (EMC), maltodextrin (MD) or their mixtures.

Grillo et al. teach a protective film for coating food forms comprising a mixture of maltodextrin and a cellulose derivative (Abstract, C2/L1-5) wherein the cellulose derivative includes methyl cellulose (MC), hydroxypropyl cellulose (HPC), hydroxypropylmethyl cellulose (HPMC), or carboxymethyl cellulose (CMC) (Abstract, C1/L60-C2/L5). Further, Grillo et al. teach maltodextrin, in combination with cellulosic polymers, exhibits excellent adhesive qualities, enhanced gloss characteristics, and reduced incidence of cloudiness (C5/L35-39).



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Steele et al. and Grillo et al. are combinable because they are concerned with the same field of endeavor, namely, compositions for edible films. It would have been obvious to one of ordinary skill in the art at the time of the invention to have added maltodextrin and cellulosic polymers, as taught by Grillo et al., to the acacia gum film coating of Steele et al. for the purpose of improving the clarity of the coating. Further, doing so would improve the adhesive and gloss characteristics of the protective film coating.

Further, Steele et al. does not disclose a film consisting of a second edible compound selected from the group consisting of a lipid, a combination of various lipids, acacia gum (AG) and a protein.

Kester et al. teach an edible film comprising a cellulose ether and lipid (Abstract). Further, Kester et al. teach that lipid-based films effectively retard transport of moisture (Abstract).

Steele et al., Grillo et al. and Kester et al. are combinable because they are concerned with the same field of endeavor, namely, edible films comprising cellulose derivatives. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a mixture of lipid and cellulose ether, as taught by Kester et al., in the edible film coating of Steele et al. for the purpose of mitigating moisture migration.

Given modified Steele et al. disclose a coating composition identical to that presently claimed, it is clear that the composition would intrinsically display antioxidative properties.

11. Claims 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steele et al. (WO 83/00278) in view of Grillo et al. (US 5,470,581) and Mate et al. ("Whey Protein and

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Acetylated Monoglyceride Edible Coatings: Effect on the Rancidity Process of Walnuts”) as applied to claim 12, and further in view of Fellows (“Food Processing Technology-Principles and Practice”).

Regarding claims 24 and 26, while modified Steele et al. disclose drying of said filmogenic solution in an oven, the reference does not disclose drying in a rotary drum by means of a blower or in a drying tunnel that comprises areas for hot air drying, infra-red lamp radiation drying, and cold air cooling. Fellows teaches that rotary drum and tunnel driers were well known in the art at the time the invention was made (p. 324). Further, it was well known that tunnel drying includes multiple stages with the first stage being the hottest, the exit stage the coldest, and the intermediate stage can include infra-red radiation. Fellows also teaches that the type of dryer chosen will depend on cost, capacity, fuel efficiency, and labor requirement (p.325). As the instant specification is silent to unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use any drier type, including a rotary drum drier and a drying tunnel with three stages to dry the filmogenic solution of Steele et al. because it would amount to nothing more than the use of a known drier for its intended use in a known environment to accomplish entirely expected result.

### ***Response to Arguments***

12. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELIZABETH GWARTNEY whose telephone number is (571)270-3874. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/E. G./

Examiner, Art Unit 1781

/Keith D. Hendricks/

Supervisory Patent Examiner, Art Unit 1781